

an imaging element which obtains an observation image of the specimen;

recognizing means for, when the setting of the observation condition in the microscope is changed, recognizing changed setting information;

color temperature detecting means, electrically connected to the recognizing means and provided between the light source of the microscope and the specimen, for detecting color temperature;

signal processing means for processing an image signal output from the imaging element in accordance with the changed setting information recognized by the recognizing means; and

gain setting means, electrically connected to the signal processing means, for changing a gain of the image signal in accordance with the color temperature detected by the color temperature detecting means.

17. (New) A microscope electronic camera for a microscope having a function of changing a setting of an observation condition of a specimen, said microscope electronic camera comprising:

an imaging element which obtains an observation image of the specimen;

recognizing means for, when the setting of the observation condition in the microscope is changed, recognizing changed setting information, and also for recognizing magnification/

10 specimen change information relating to at least one of a change
of observation magnification and a change of the specimen;
signal processing means for processing an image signal
output from the imaging element in accordance with the changed
setting information recognized by the recognizing means; and
15 filter coefficient changing means, connected to the signal
processing means, for changing a filter coefficient, which
determines a degree of contour accentuation suitable for
observation with respect to the image signal, in accordance with
the magnification/specimen change information recognized by the
recognizing means.

C |
Cmt
20

18. (New) A microscope electronic camera for a microscope
having a function of changing a setting of an observation
condition of a specimen, said microscope electronic camera
comprising:

5 an imaging element which obtains an observation image of the
specimen;
recognizing means for, when the setting of the observation
condition in the microscope is changed, recognizing changed
setting information, and also for recognizing observation method
10 change information relating to a change of observation methods;
signal processing means for processing an image signal
output from the imaging element in accordance with the changed
setting information recognized by the recognizing means;

setting means, connected to the signal processing means,
15 for setting a tone conversion table corresponding to an
observation method in accordance with the observation method
change information recognized by the recognizing means; and
correcting means for correcting a tone of the image signal
based on the tone conversion table set by the setting means.

C1
(cont)

19. (New) A microscope electronic camera for a microscope
having a light source, an optical system for forming an image of
a specimen, and a function of changing a setting of an
observation condition of the specimen, said microscope electronic
5. camera comprising:

an imaging element which obtains an observation image of the
specimen;

a microscope control section configured to, when the setting
of the observation condition in the microscope is changed,
10 recognize changed setting information;

a color temperature detection section, electrically
connected to the microscope control section and provided between
the light source of the microscope and the specimen, configured
to detect color temperature;

15 an image control section configured to process an image
signal output from the imaging element in accordance with the
changed setting information recognized by the microscope control
section; and

20 a gain setting section which is electrically connected to
the image control section and which is configured to change a
gain of the image signal in accordance with the color temperature
detected by the color temperature detection section.

20. (New) A microscope electronic camera for a microscope
having a function of changing a setting of an observation
condition of a specimen, said microscope electronic camera
comprising:

5 an imaging element which obtains an observation image of the
specimen;

a microscope control section configured to, when the setting
of the observation condition in the microscope is changed,
recognize changed setting information, and also configured to
10 recognize magnification/specimen change information relating to
at least one of a change of observation magnification and a
change of the specimen;

an image control section configured to process an image
signal output from the imaging element in accordance with the
15 changed setting information recognized by the microscope control
section; and

a filter circuit which is connected to the image control
section and which changes a filter coefficient, which determines
a degree of contour accentuation suitable for observation with
20 respect to the image signal, in accordance with the

magnification/specimen change information recognized by the microscope control section.

21. (New) A microscope electronic camera for a microscope having a function of changing a setting of an observation condition of a specimen, said microscope electronic camera comprising:

*C
Cant⁵*
an imaging element which obtains an observation image of the specimen;

a microscope control section configured to, when the setting of the observation condition in the microscope is changed, recognize changed setting information, and also 10 configured to recognize observation method change information relating to a change of observation methods;

an image control section configured to process an image signal output from the imaging element in accordance with the changed setting information recognized by the microscope control 15 section;

an *LUT* setting section which is connected to the image control section and which sets a tone conversion table corresponding to an observation method in accordance with the observation method change information recognized by the 20 microscope control section; and

an LUT circuit configured to correct a tone of the image signal based on the tone conversion table set by the LUT setting section.